

ONKYO SERVICE MANUAL

SYNTHESIZED FM STEREO/AM TUNER MODEL T-4711

European model(FM STEREO TUNER)



Black,Silver and Golden models

BUDN,GUDN	120V, AC,60Hz
BUP,BUPB,BUPT,SUPT,SUPB,GUPT	230V AC,50Hz
BUWT,GUWT	120/220V AC, 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

TABLE OF CONTENTS

Specifications.....	2
Service procedures.....	2
Block diagram	3
Exploded view.....	4
Exploded view-parts list.....	5
Microprocessor connection diagram.....	6
Microprocessor descriptions.....	7
Adjustment procedures.....	8
Printed circuit board view.....	11
Main circuit pc board view.....	11
Other pc boards view.....	17
Schematic diagram	13
Printed circuit board-parts list.....	19
IC block diagrams and descriptions.....	21
Packing view.....	24

ONKYO
AUDIO COMPONENTS

SPECIFICATIONS

FM

Tuning Range:	European and Worldwide models: 87.50 - 108.00 MHz (50 kHz steps) USA and Canadian models: 87.90 - 107.90 MHz (200 kHz steps)
Usable Sensitivity:	Mono: 10.3 dBf 0.9μV, 75 Ohms IHF 0.8μV, 75 Ohms DIN Stereo: 17.2 dBf 2.0μV, 75 Ohms IHF 20μV, 75 Ohms DIN
50 dB Quieting Sensitivity:	Mono: 16.1 dBf 1.7μV 75 Ohms Stereo: 36.1 dBf 17μV 75 Ohms
Capture Ratio:	1.3 dB
Image Rejection Ratio:	100 dB
IF Rejection Ratio:	100 dB
Signal-to-Noise Ratio:	Mono: 85 dB IHF Stereo: 77 dB IHF 70 dB IHF (Narrow)
Selectivity:	70 dB DIN (±300 kHz, 40 kHz dev.)
AM Suppression Ratio:	50 dB
Total Harmonic Distortion:	Mono: 0.1% 0.3% (Normal 40 kHz dev.) Stereo: 0.2% 0.7% (Normal 40 kHz dev.)
Frequency Response:	30 - 15,000 Hz (+0.5, -1.0 dB)
Stereo Separation:	45 dB at 1 kHz 33 dB at 70 - 10,000 Hz
Output Voltage:	1.0 V
Muting Level:	17.2 dBf 2.0 μV, 75 Ohms

AM

Tuning Range:	USA and Canadian models: 530 - 1710 kHz (10 kHz steps) Asian models: 522 - 1611 kHz (9 kHz steps) Worldwide models: 531 - 1602 kHz (9 kHz steps) 530 - 1710 kHz (10 kHz steps)
Usable Sensitivity:	25μ V
Image Rejection Ratio:	40 dB
IF Rejection Ratio:	40 dB
Signal-to- Noise Ratio:	40 dB
Total Harmonic Distortion:	0.8%
Output Voltage:	250 mV

General

Power Supply:	USA and Canadian models: AC 120V, 60Hz European models: AC 230V, 50Hz Worldwide models: AC 120V and 220 - 230V switchable, 60/50 Hz
Dimensions (W × H × D):	435 × 91 × 373 mm 17-1/8" × 3-9/16" × 14-11/16"
Mass:	4.9 kg, 10.8 lbs.

Specifications and features are subject to change without notice.

SERVICE PROCEDURES

1. Safety-check out

After correcting the original service problem, perform the following safety check before releasing the set to the customer.

Connect the insulating-resistance tester between the plug of power supply cord and chassis.

Specifications: More than 10MΩ at 500V.

2.Memory Preservation

This unit does not require memory preservation batteries. A Built memory power back-up system preserves contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in and the power switch turned on and off once in order to change the back-up system. Note that since this is not a permanent memory, the power switch must be turned on and off a few times each month to keep the back-up system operative. the period of time during which memory contents are preserved after power has last been turned off varies depending on climate and placement of the unit.

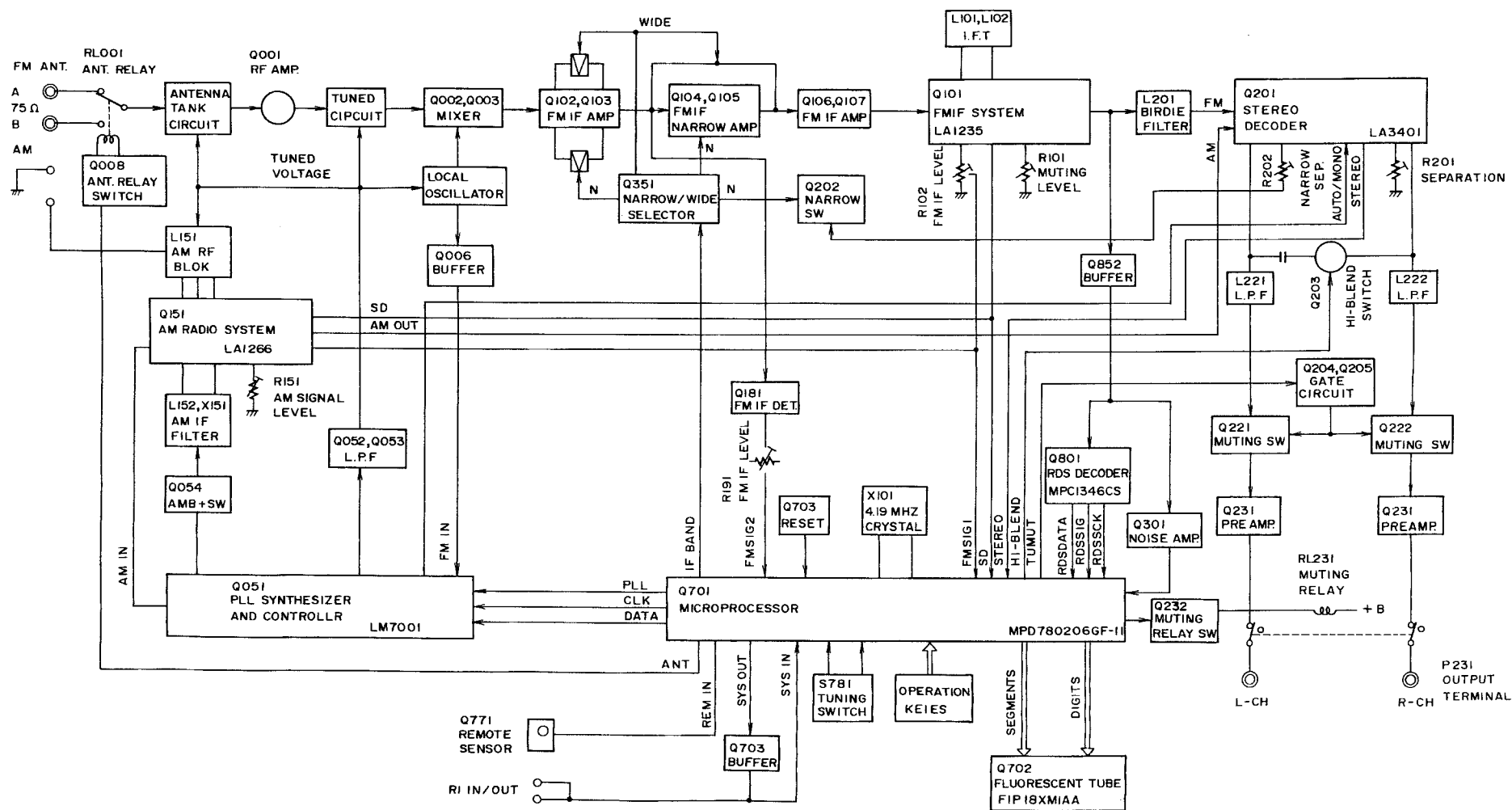
On the average, memory contents are protected over a period of 3 to 4 weeks (a minimum of 2 weeks) after the last time power has been turned off. This period is shorter when the is exposed to very high humidity or used in an area with an extremely humid climate.

3. Changing the FM/AM band step

(Except European model)

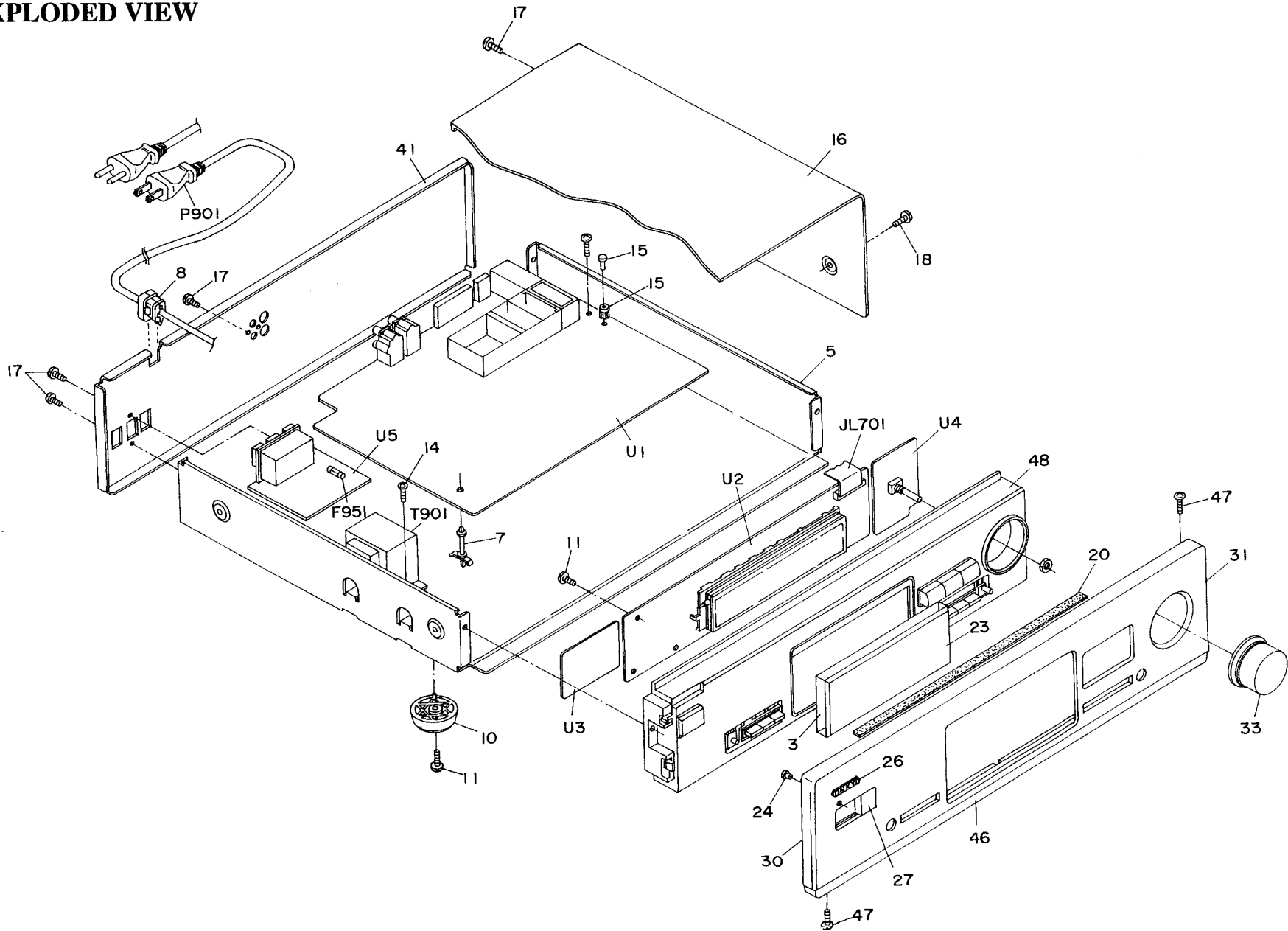
When change the band step, refer the below table.

Band step	R704	R705
Other from USA	2.7k	390
USA from other	5.6k	3.3k

1
ω
1

EXPLODED VIEW

- 4 -



PARTS LIST

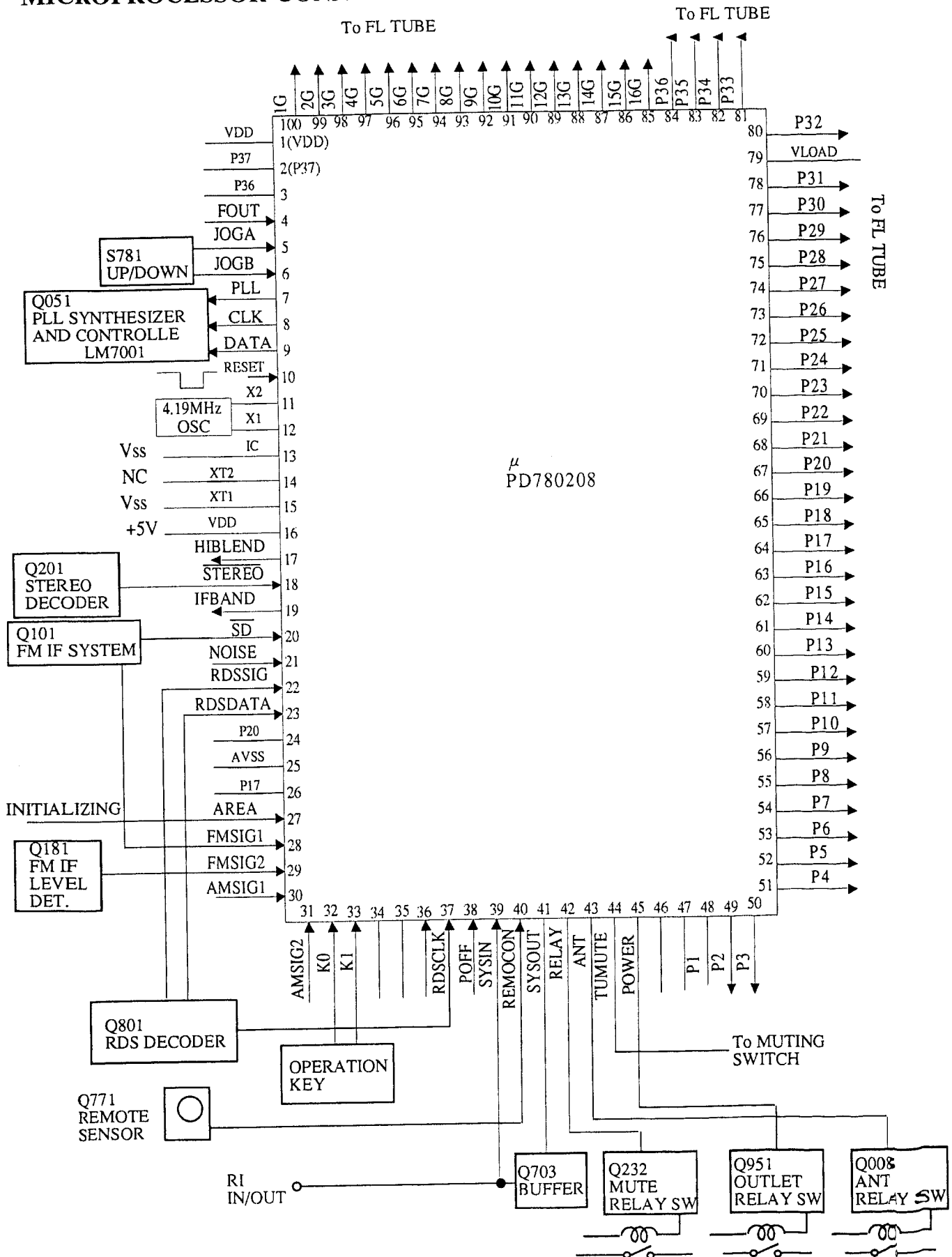
REF.NO.	PART NO.	DESCRIPTION
3	28133349-1	Back plate
	28133345	Back plate <S/G>
5	27100316A	Chassis
7	27190164	KGLS-14S,Holder
8	27300750	△ Cord bushing
10	27175311	Leg
11	838130088	3TTB+8B,Self-tappin screw
14	830440069	4TTC+6C(BC),Self-tapping screw
15	880009	NRP-345,Plastic rivet
16	28184642	Top cover
	28184643	Top cover <S>
	28184644	Top cover <G>
17	838430088	3TTB+8B(BC),Self-tapping screw
	838230088	3TTB+8B(Ni),Self-tapping screw <S/G>
18	838440089	4TTC+8B(BC),Self-tapping screw
	838240089	4TTC+8B(Ni),Self-tapping screw <S/G>
20	28140837	Cushion
21	28141333	Cushion for flat cable
23	28191731A	Clear plate
24	28198839	Facet
26	28135243	Badge
	28135242	Badge <S>
27	28191730	Clear plate RE
30	28125327A	End cap L
	28125329A	End cap L <S>
	28125331A	End cap L <G>
31	28125328A	End cap R
	28125330A	End cap R <S>
	28125332A	End cap R <G>
33	28325354	Knob, tuning
	28325355	Knob, tuning <S>
	28325356	Knob, tuning <G>
41	27122180A	Rear panel <D>
	27122181A	Rear panel <P>
	27122182A	Rear panel <W>
46	27211785	Front panel <D/W/T>
	27211788	Front panel <P>
	27211786	Front panel <S>
	27211787	Front panel <G>
47	801525	3TTB+8B(BC),Self-tapping screw <D/P>
48	27110937A	Front bracket <D/W/T>
	27110950A	Front bracket <P>
	27110938A	Front bracket <S>
	27110939A	Front bracket <G>

REF.NO.	PART NO.	DESCRIPTION
91	260208	Wire tie
92	28175224	Isolation plate <P>
93	880011	NRP-355, Plastic rivet <P>
94	25060044	3*14, Terminal GND <P>
95	87643010	W3x10F(BC), Washer <P>
F951	252077	△ 4A-SE-EAK, Fuse <P>
JL701	2047302512	NCFC7-302512, Flat cable
P901	253192HIT	△ AS-UC-6#18-(SPT-2), AC cord <D>
	253193HIT	△ AS-CEE, AC cord <P>
	253198HIT	△ AS-BS, AC cord <PB>
	253233KAW	△ AS-CEE-2, AC cord <W>
T901	2301193	△ NPT-1270D, Power transformer <D>
	2301194	△ NPT-1270P, Power transformer <P>
	2301195	△ NPT-1270DG, Power transformer <W>
U1	1A685587-1A	NAAR-5787-1A, Main circuit pc board ass'y <P/PB>
	1A685587-1B	NAAR-5787-1B, Main circuit pc board ass'y <T>
	1A685587-1C	NAAR-5787-1C, Main circuit pc board ass'y <W>
	1A685587-1D	NAAR-5787-1D, Main circuit pc board ass'y <D>
U2	1A685588-1A	NADG-5788-1A, Display circuit pc board ass'y <P/B>
	1A685588-1B	NADG-5788-1B, Display circuit pc board ass'y <T>
	1A685588-1C	NADG-5788-1C, Display circuit pc board ass'y <W>
	1A685588-1D	NADG-5788-1D, Display circuit pc board ass'y <D>
U3	1A685589-1A	NAETC-5789-1A, Remote sensor pc board ass'y <P/PB>
	1A685589-1B	NAETC-5789-1B, Remote sensor pc board ass'y <T>
	1A685589-1C	NAETC-5789-1C, Remote sensor pc board ass'y <W>
	1A685589-1D	NAETC-5789-1D, Remote sensor pc board ass'y <D>
U4	1A685590-1A	NASW-5790-1A,Tuning switch pc board ass'y <P/PB>
	1A685590-1B	NASW-5790-1B,Tuning switch pc board ass'y <T>
	1A685590-1C	NASW-5790-1C,Tuning switch pc board ass'y <W>
	1A685590-1D	NASW-5790-1D,Tuning switch pc board ass'y <D>
U5	1A685591-1A	NAPS-5791-1A, Primary circuit pc board ass'y <P/PB>
	1A685591-1B	NAPS-5791-1B, Primary circuit pc board ass'y <T>
	1A685591-1C	NAPS-5791-1C, Primary circuit pc board ass'y <W>
	1A685591-1D	NAPS-5791-1D, Primary circuit pc board ass'y <D>
U6	1A685528-1C	NASW-5828-1C,Voltage selector pc board ass'y <W>

NOTE: <D>: 120V model only
<P>: 230V model only
<PB>: U.K model only
<W>: Wolrdwide model only
<T>:Taiwanease model only
: Black model only
<S>: Silver model only
<G>: Golden model only

NOTE: THE COMPONENTS INENTIFIED BY MARK
△ ARE CRITICAL FOR RISK OF FIRE AND
ELECTRIC SHOCK. REPLACE ONLY WITH
PART NUMBER SPECIFIED.

MICROPROCESSOR-CONNECTION DIAGRAM



MICROPROCESSOR-TERMINAL DESCRIPTION

Pin No.	Terminal	Description
1	VDD	Power supply terminal (+5V)
2	P37	Not used
3	P36/BUZ	Not used
4	FOUT	Clock output terminal for frequency adjustment
5	JOGA	Jog dial connection terminal
6	JOGB	Jog dial connection terminal
7	PLL	Connect to the terminal PLL of PLL IC LM7001.
8	CLK	Connect to the terminal CL of PLL IC LM7001.
9	DATA	Connect to the terminal DATA of PLL IC LM7001.
10	RESET	Reset input terminal
11	X2	Crystal resonator connection terminal
12	X1	Connect the 4.19 MHz crystal resonator.
13	IC	Internal connection terminal
14	XT2	Not used
15	PO4/XT1	Not used
16	VDD	Power supply terminal (+5V)
17	HIBLND	Hi-blend control output terminal
18	STEREO	Stereo broadcast detection input
19	IFBAND	IF band control output terminal
20	SD	Station detection input terminal
21	NOISE	Noise detection input terminal
22	RDSSIG	RDS signal input terminal
23	RDSDATA	RDS data input from RDS decoder
24	P20/S11	Not used
25	AVSS	Power supply terminal for A/D converter
26	P17/ANI7	Not used
27	AREA	Initializing input for FM/AM band area
28	FMSIG1	Signal strength detection input
29	FMSIG2	Signal strength detection input
30	AMSIG1	Not used
31	AMSIG2	Not used
32	K0	Operation key connection terminal pin
33	K1	Operation key connection terminal pin
34	AVDD	Power supply terminal for A/D converter
35	AVREF	Reference voltage for A/D converter
36	RDSCLK	RDS clock input terminal for RDS decoder

Pin No.	Terminal	Description
37	POFF	Current stoppage detection input terminal
38	SYSIN	System code input terminal
39	REMOCON	Remote control signal input terminal
40	Vss	Ground terminal
41	SYSOUT	System code output terminal
42	RELAY	AC outlet control terminal
43	ANT	Antenna selector output terminal
44	TUMUTE	Muting control output terminal
45	POWER	Power control output terminal
46	VDD	Power supply terminal (+5V)
47	P127/FIP52	Not used
48~78	P1~P31	Segment output terminals
79	-VP	Power supply for FL tube
80~84	P32~P36	Segment output terminals
85~100	16G~1G	Grid output terminals

Initializing

R704	R705	Region	FM	AM
3.3k	5.6k	Europe	87.50-108.00MHz(50k/25k)	522-1611kHz(9k)
10k		Worldwide	87.50-108.00MHz(50k/25k)	531-1602kHz(9k)
5.6k	3.3k	U.S.A	87.9-107.9MHz(200k/25k)	530-1710kHz(10k)

ADJUSTMENT PROCEDURES

Preparation

1. Input

FM mono: 1kHz, 40kHz devi., 60dB/ μ V

(European model)

1kHz, 75kHz devi., 60dB/ μ V

(Other model)

FM stereo: 1kHz, 36kHz devi., 60dB/ μ V

Pilot signal 19kHz 4kHz devi.

(European model)

1kHz, 67.5kHz devi., 60dB/ μ V

Pilot signal 19kHz 7.5kHz devi.

(Other model)

AM: 400Hz, 30% mod.

1. Set the operation switches to the below position.

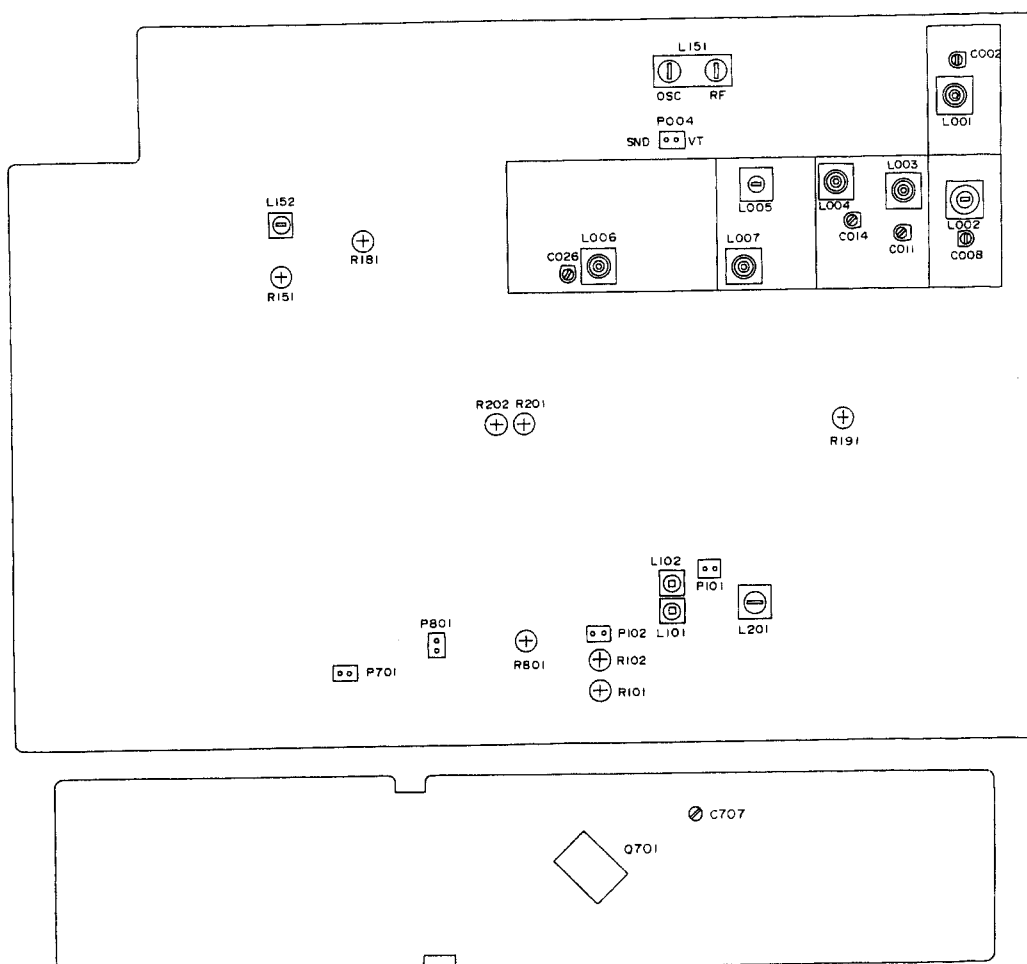
Antenna.....A, IF Band.....Normal, Hi-Blend.....Off, Mode.....Auto, Fine.....Light on

2. Hold down MEMORY key and press the STAND-BY/ON key before FM adjustment to be the unit to the test mode.

CLOCK FREQUENCY ADJUSTMENT

Connect the frequency counter to test terminal P701.

Adjust trimmer capacitor C707 so that the reading of frequency counter becomes $524,288 \pm 1\text{Hz}$.



FM ADJUSTMENT

230V and Worldwide models

	Item	Step	Connection of Instrument	FM SG output	Stereo Modulator output	Tuned frequency	Output indicator	Adjustment point	Adjust for	Remarks
1	Tuned Voltage	1	Connect the DC voltmeter to the test point P004.			87.50 MHz (1 ch.)	DC voltmeter	L006	6.5±0.2 V	(1 ch.): Channel of PRESET key Repeat the steps 2 and 3 until no further adjustment is necessary.
		108.00 MHz (5 ch.)				C026		24.0±0.4 V		
		87.50 MHz				L006		4.0±0.2 V		
2	Tracking Adjust.	1	Connect the FM signal generator to Antenna terminal A.	108.00 MHz 20 dB μ		108.00 MHz	DC voltmeter	C002,C008 C011,C014	Maximum	Repeat the steps 1 and 2 until no further adjustment is necessary.
		87.50 MHz 20 dB μ		87.50 MHz		L001,L002 L003,L004		Maximum		
		3	Connect the DC voltmeter to the test point P102.	108.00 MHz 20 dB μ		100.80 MHz		L005 L007	Maximum	
3	Signal Meter	1	Connect the FM signal generator to Antenna terminal A. (No modulation)	99.00 MHz 50 dB μ		99.00 MHz (3 ch.)	Signal	R102	50 dB	Press the DISPLAY key more than 1 sec. (Signal meter indication) After adjustment, press the DISPLAY key (Frequency indication)
		99.00 MHz 99 dB μ		Meter			R191	99 dB		
4	FM IF	1	Connect the DC voltmeter to test point P101 and the distortion analyzer to output terminal.	99.00 MHz 60 dB μ		99.00 MHz (3 ch.)	DC voltmeter	L101	0±5 mV	Repeat the steps 1 and 2 until no further adjustment is necessary.
		2					Distortion analyzer	L102	Minimum	
5	Muting level		Connect the oscilloscope to the output terminal.	99.00 MHz 18 dB μ 22.5 kHz devi.		99.00 MHz	Oscilloscope	R101	Appear the signal on the oscilloscope.	
6	Stereo Sepa- ration		Connect the oscilloscope to the output terminal.	99.00 MHz 60 dB μ Ext. mode	40kHz devi. Pilot signal 4kHz devi.	99.00 MHz	Oscilloscope	R201	Maximum Separatin	IF BAND: NORMAL
								R202	Maximum Separation	IF BAND: NARROW
7	RDS		Connect the oscilloscope to the test point P801.	99.00 MHz 60 dB μ Ext. mode	57 kHz 3% devi. or RDS data signal	99.00 MHz	Oscilloscope	R801	Maximum	

120V models

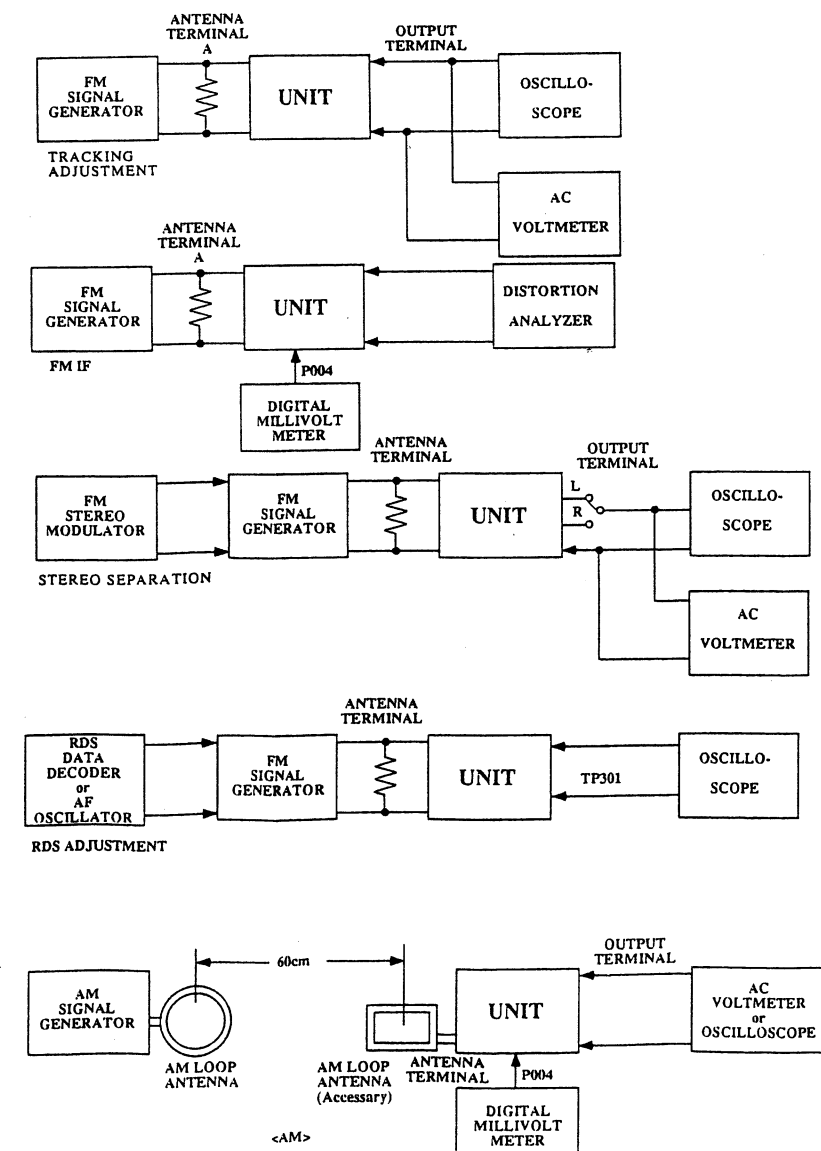
120 V models

	Item	Step	Connection of instrument	FM SG output	Stereo Modulator output	Tuned frequency	Output indicator	Adjustment point	Adjust for	Remarks
1	Tuned Voltage	1	Connect the DC voltmeter to the test point P004.			87.90 MHz (1 ch.)	DC voltmeter	L006	6.5±0.2 V	(1 ch.): Channel of PRESET key Repeat the steps 2 and 3 until no further adjustment is necessary.
		107.90 MHz (5 ch.)				C026		24.0±0.4 V		
		87.90 MHz				L006		4.0±0.2 V		
2	Tracking Adjust.	1	Connect the FM signal generator to Antenna terminal A.	107.9 MHz 20 dB μ		107.90 MHz	DC voltmeter	C002,C008 C011,C014	Maximum	Repeat the steps 1 and 2 until no further adjustment is necessary.
		87.9 MHz 20 dB μ		87.90 MHz		L001,L002 L003,L004		Maximum		
		3	Connect the DC voltmeter to the test point P102.	107.90 MHz 20 dB μ		107.90 MHz		L005 L007	Maximum	
3	Signal Meter	1	Connect the FM signal generator to Antenna terminal A. (No modulation)	99.10 MHz 50 dB μ		99.10 MHz (3 ch.)	Signal	R102	50 dB	Press the DISPLAY key more than 1 sec. (Signal meter indication) After adjustment, press the DISPLAY key (Frequency indication)
		2		99.10 MHz 99 dB μ			Meter	R191	99 dB	
4	FM IF	1	Connect the DC voltmeter to test point P101 and the distortion analyzer to output terminal.	99.10 MHz 60 dB μ		99.10 MHz (3 ch.)	DC voltmeter	L101	0±5 mV	Repeat the steps 1 and 2 until no further adjustment is necessary.
		2						Distortion analyzer	L102	
5	Muting level		Connect the oscilloscope to the output terminal.	99.10 MHz 18 dB μ 22.5 kHz devi.		99.10 MHz	Oscilloscope	R101	Appear the signal on the oscilloscope.	
6	Stereo Sepa- ration		Connect the oscilloscope to the output terminal.	99.10 MHz 60 dB μ Ext. mode	75kHz devi. Pilot signal 7.5kHz devi.	99.10 MHz	Oscilloscope	R201	Maximum Separatin	IF BAND: NORMAL
								R202	Maximum Separation	IF BAND: NARROW
7	RDS		Connect the oscilloscope to the test point P801.	99.10 MHz 60 dB μ Ext. mode	57 kHz 3% devi. or RDS data signal	99.10 MHz	Oscilloscope	R801	Maximum	

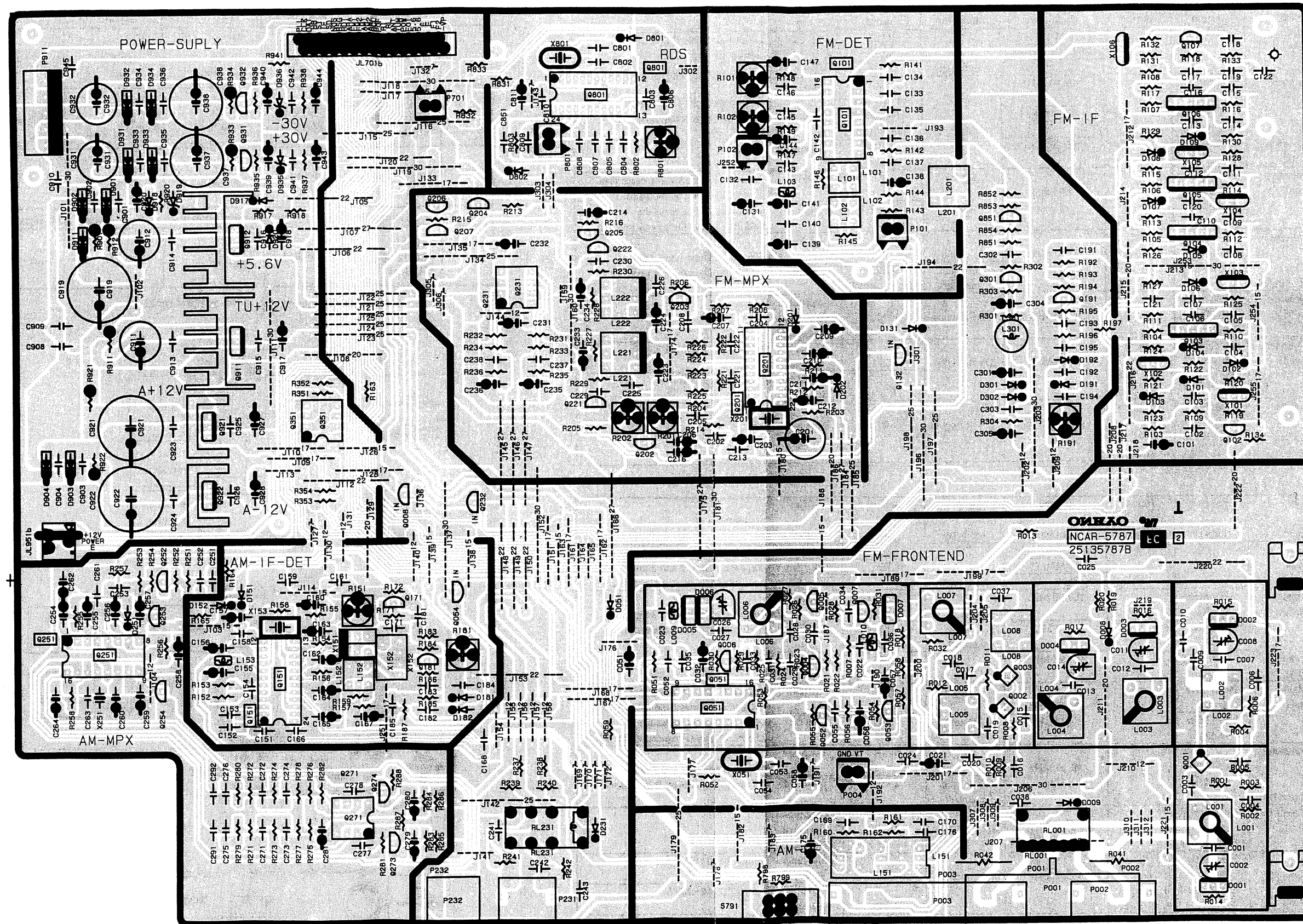
AM ADJUSTMENT

Step	AM SG output	Tuning Frequency	Output Indicator	Adjustment point	Adjust for
1		522kHz <530kHz> (531kHz)	Digital DC voltmeter	OSC coil on RF block L151	2.4 ± 0.1 V
2	603kHz<600kHz> 400Hz 30% mod. 60dB/m	603kHz <600kHz>	AC voltmeter	RF coil on RF block L151	Maximum
3	990kHz 400Hz 30% mod. 60dB/m	990kHz	AC voltmeter	L152	Maximum
4	Hold down the DISPLAY button more than 1 second to display "AM Signal".				
5	990kHz 400Hz no mod. 60dB/m	990kHz	Signal Indicator	R151	60 dB

(): Worldwide model < >: 120V model

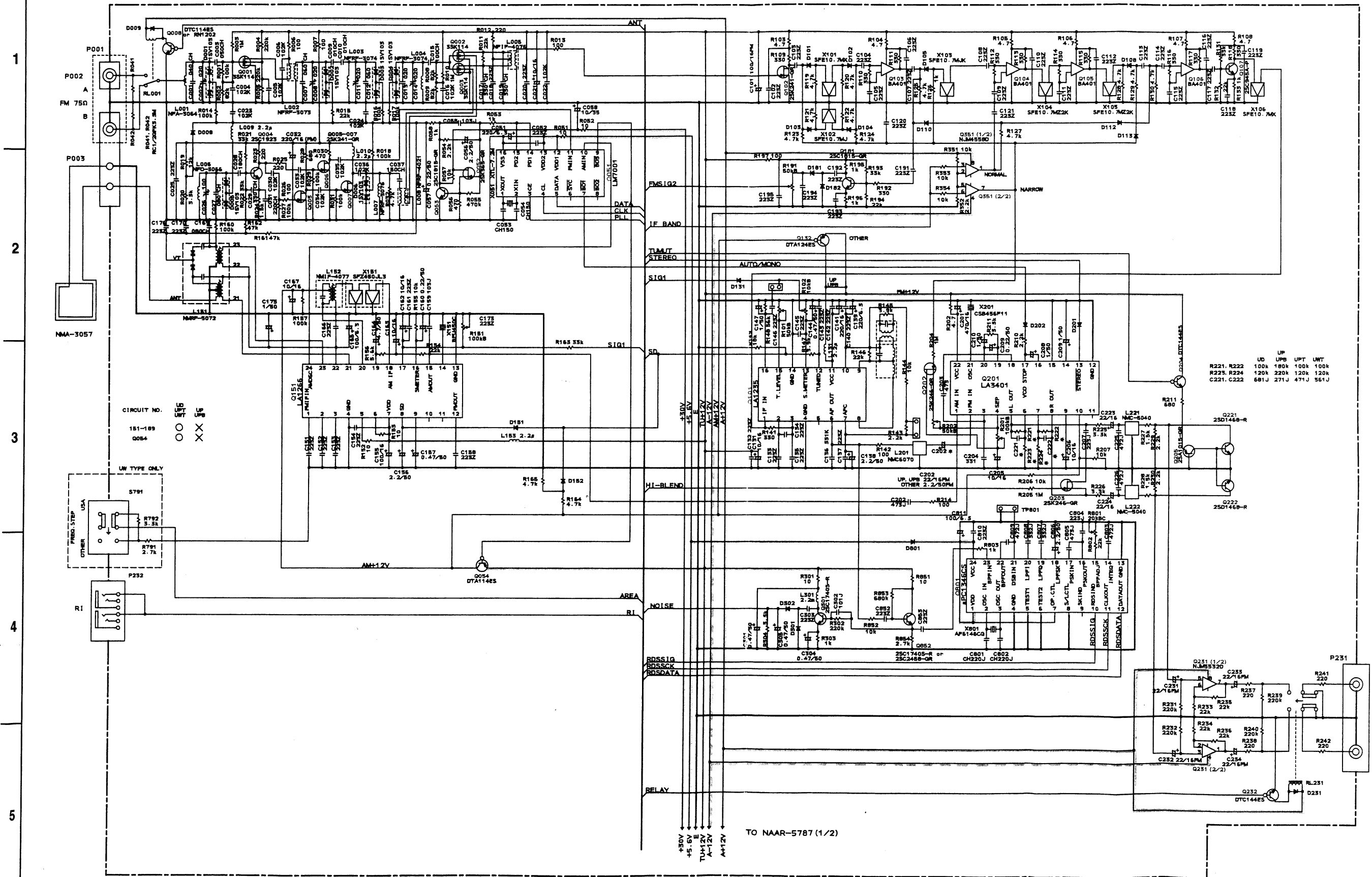


PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE

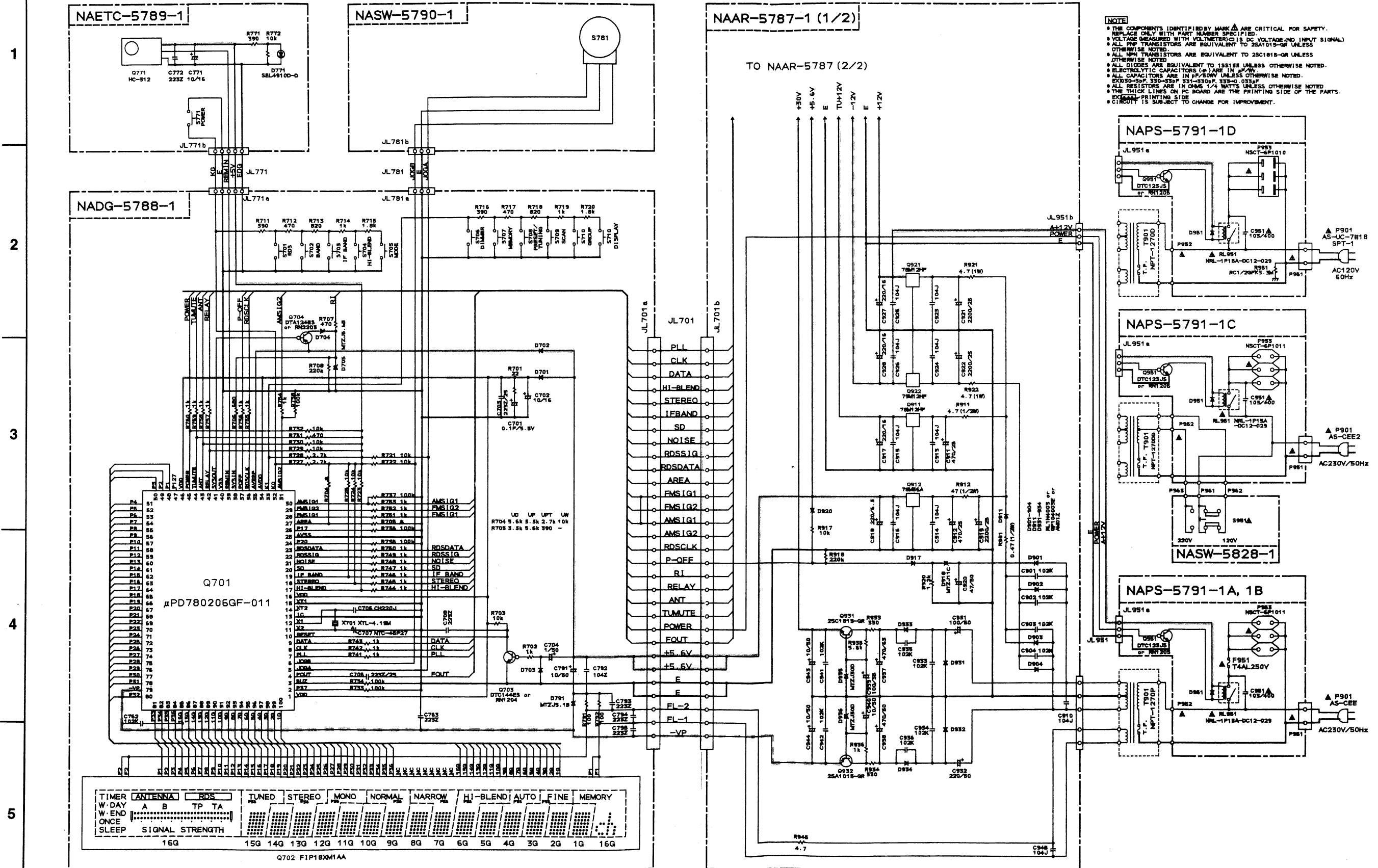


MAIN CIRCUIT PC BOARD

SCHEMATIC DIAGRAM PART -1

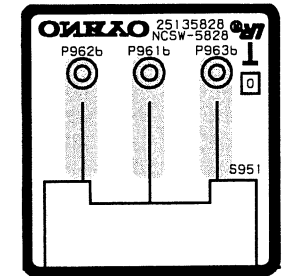
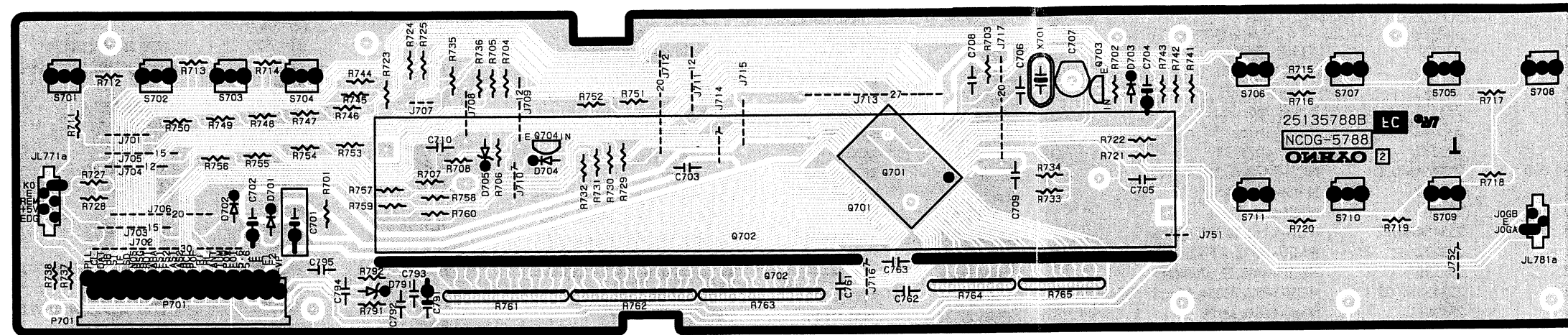


SCHEMATIC DIAGRAM PART-2



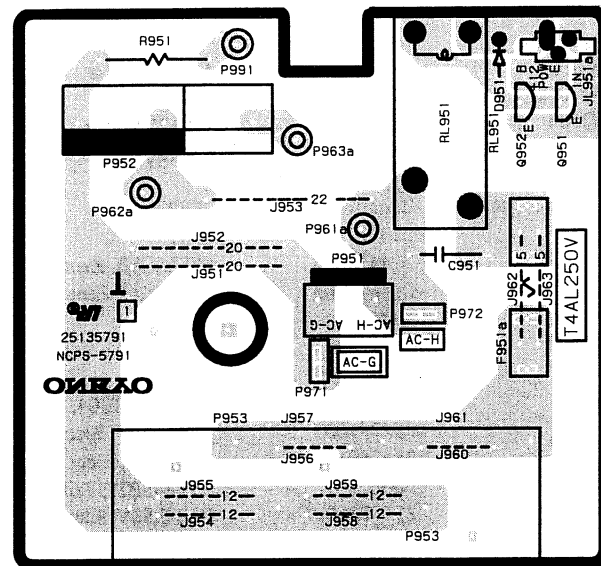
NOTE
 * THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR SAFETY.
 * REPLACE ONLY WITH PART NUMBER SPECIFIED.
 * VOLTAGE MEASURED WITH VOLTMETER IS DC VOLTAGE (NO INPUT SIGNAL).
 * ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-OR UNLESS OTHERWISE NOTED.
 * ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-OR UNLESS OTHERWISE NOTED.
 * ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
 * ELECTROLYTIC CAPACITORS (E) ARE IN μ F/VOL.
 * ALL CAPACITORS ARE IN P/P/50V UNLESS OTHERWISE NOTED.
 * 2000-50V, 330-330P, 331-330P, 333-0, 033P.
 * ALL RESISTORS ARE IN OHMS 1/4 WATTS UNLESS OTHERWISE NOTED.
 * THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
 * CIRCULAR PRINTING SIDE
 * CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE

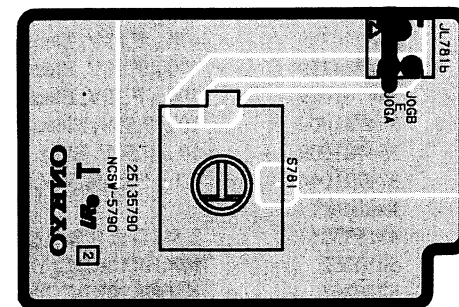


DISPLAY CIRCUIT PC BOARD

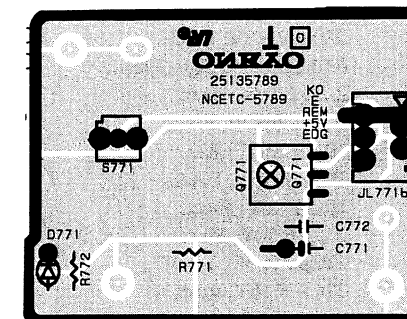
VOLTAGE SELECTOR
SWITCH PC BOARD



PRIMARY CIRCUIT PC BOARD



TUNING SWITCH PC BOARD



REMOTE SENSOR PC BOARD

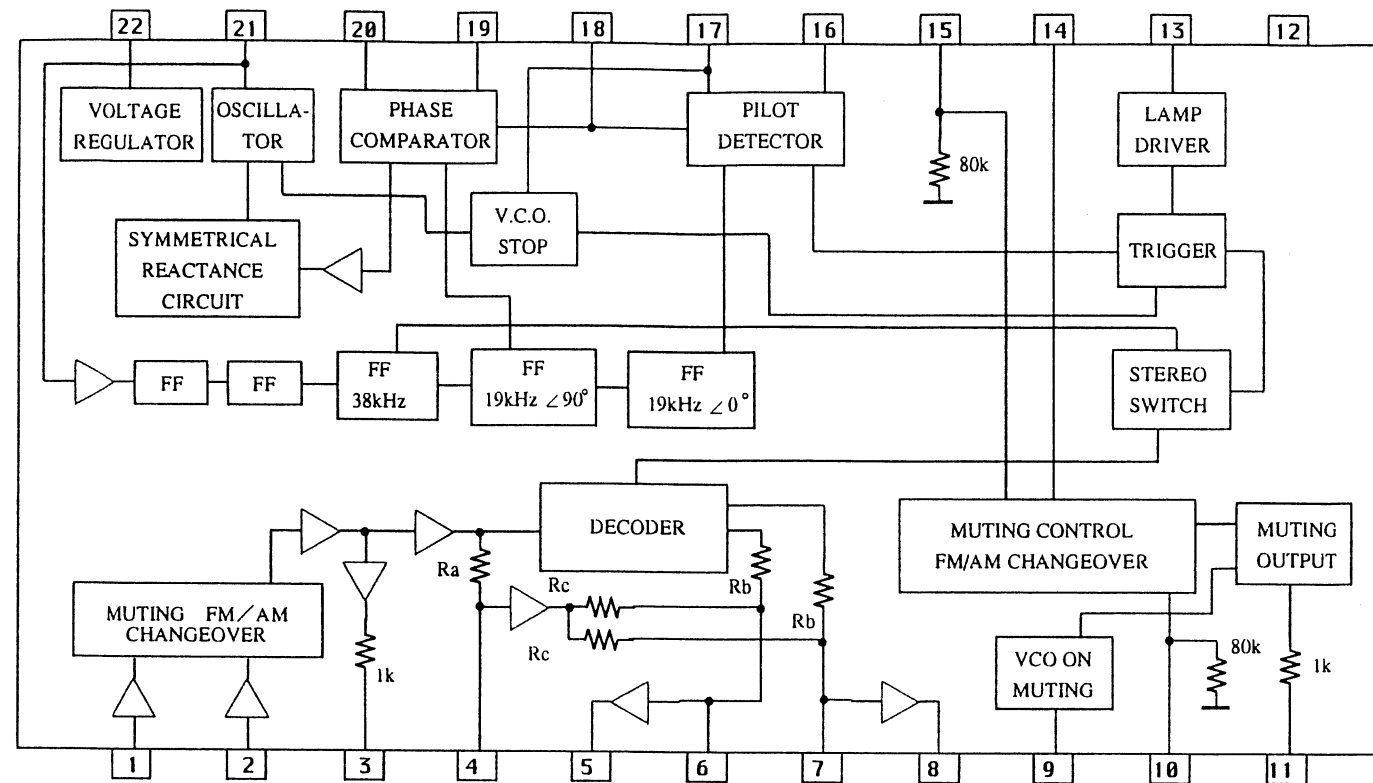
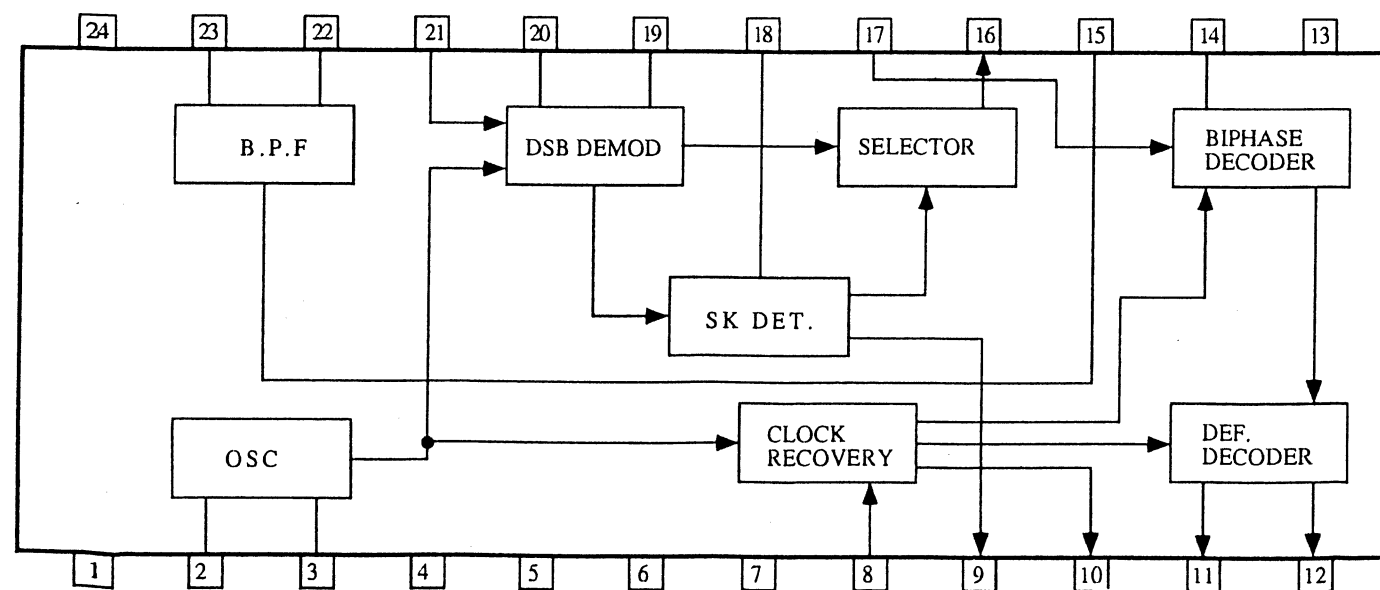
PRINTED CIRCUIT BOARD-PARTS LIST

MAIN CIRCUIT PC BOARD (NAAR-5787-1A/1B/1C/1D)

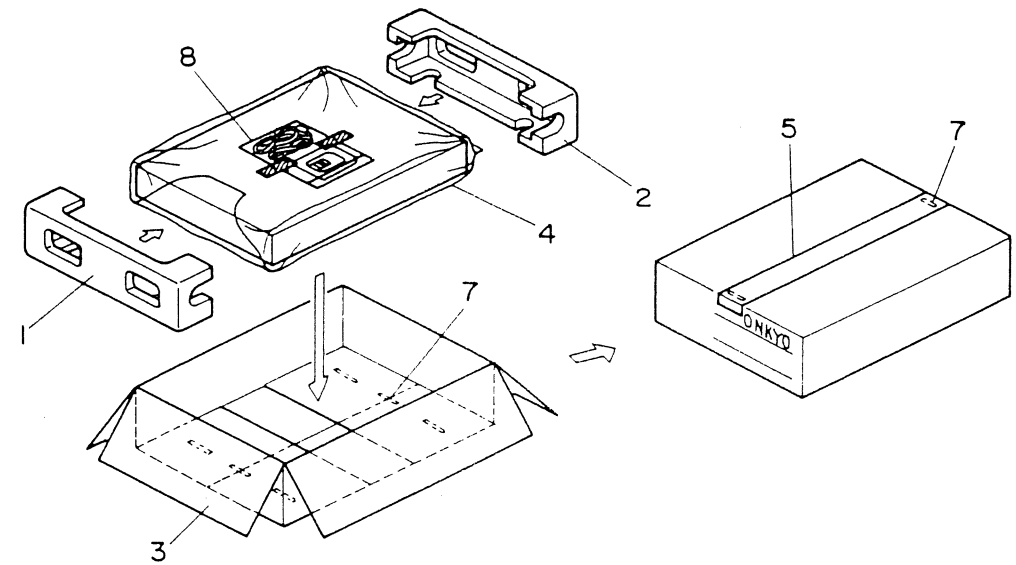
CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.
	ICs		
Q051	22240090	LM7001	L001
Q101	222680	LA1235	L002
Q103~Q106	22240821	BA401	L003,L004
Q151	22240039	LA1266 <D/W/T>	L005
Q201	22240252	LA3401	L006
Q231	222902	NJM5532D-D	L007
Q351	222465	NJM4558D	L008
Q801	22240679	μ PC1346CS	L009,L010
Q911	222780125NEC	μ PC78M12AHF	L101
Q912	222780565JRC	NJM78M56FA	L102
Q921	222780125NEC	μ PC78M12AHF	L103
Q922	222790125NEC	79M12HF	L151
	Transistors		L152
Q001~Q003	2212514	3SK114-Y	L153
Q004	2211723	2SC1923-O	L201
Q005~Q007	2212195	2SK241-GR	L221,L222
Q008	2213290 or 2214230	DTC114ES or RN1202	L222
Q052	2212445	2SK365-GR	L301
Q053,Q191	2213284 or 2212115	2SC1740S-R or 2SC2458-GR	X051
Q054	2213510 or 2214350	DTA114ES or RN2202 <D/W/T>	X201
Q102	2212195	2SK241-GR	X801
Q107	2210746	2SC945A-P	X101
Q132	2212600 or 2214350	DTA124ES or RN2202 <D/W/T>	X102,X103
Q202,Q203	2211945	2SK246-GR	X104,X105
Q204,Q206	221282 or 2213560	DTC144ES or RN1204	X106
Q205	2213354 or 2212125	2SA933S-R or 2SA1048-GR	X151
Q207	2213510 or 2214350	DTA114ES or RN2202	X153
Q221,Q222	2212794	2SD1468-R	C002,C008
Q232	2213290 or 2214230	DTC114ES or RN1202	C011,C014
Q301,Q851	2213284 or 2212115	2SC1740S-R or 2SC2458-GR	C021
Q931	2211255	2SC1815-GR	C026
Q932	2211455	2SA1015-GR	C032
	Diodes		C051
D001~D007	223154	1SV103	C055
D008,D009	223205 or 223163	1SS270A or 1SS133	C056
D051	223205 or 223163	1SS270A or 1SS133	C057
D101~D109	223205 or 223163	1SS270A or 1SS133	C058
D191,D192	223205 or 223163	1SS270A or 1SS133	C101
D201,D202	223205 or 223163	1SS270A or 1SS133	C131
D231	223205 or 223163	1SS270A or 1SS133	C138
D301,D302	223205 or 223163	1SS270A or 1SS133	C139
D801	22380260,	RL1N4003,	C141
D901~D904	22380035 or 22380046	GP104003E or AM01Z	C147
D931~D934	223205 or 223163	1SS270A or 1SS133	C155
D917,D920	224471103	MTZJ11C, Zener	C156
D918	224473004	MTZJ30D, Zener	C157
D935,D936	223205 or 223163	1SS270A or 1SS133 <D/W/T>	C159
D131,D151			C160
D152			C162,C163

PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
	Coils and Transformers		
233487	NFA-3064, Antenna	3010141	XTL-7.2M, Crystal
233488	NFRF-3073, RF	3010152	CSB456F11, Ceramic
233489	NFRF-3074, RF	3010203	AF6146CG, Crystal
233441	NFIF-4076, IF		Ceramic filters
233491	NFO-3066, OSC	3010041	SFE10.7MX-A
233492A	NFRF-3076, RF	3010132	SFE10.7MJK-A
233212	NFRF-4021, RF	3010130	SFE10.7MZZK-A
233454M022	NCH-1452, 022M, Chock	3010041	SFE10.7MX-A, CERA FIL
233459	NFIF-4083, IF	3010123	SFZ-450JL, CERA FIL <D/W/T>
233460	NFIF-4084, IF	3010076	BFU-450C, CERA FIL <D/W/T>
233454M022	NCH-1452, 022M, Chock		Capacitors
232172	NMRF-5072, RF <D/W/T>	3060020	NTC-2P17, Trimmer
232139	NMIF-4062, IF <D/W/T>	3060020	NTC-2P17, Trimmer
233454M022	NCH-1452, 022M, Chock <D/W/T>	354741009	10 μ F, 16V, Elect.
233383	NMC-6070, MPX	3060017	220 μ F, 16V, Elect.
233294	NMC-5040, MPX	393142217	220 μ F, 6.3V, Elect.
231081	NCH-2129, Chock	354722219	220 μ F, 6.3V, Elect.
	Resonators	374721034	0.01 μ F \pm 5%, 50V, Plastic
3010141	XTL-7.2M, Crystal	354780229	2.2 μ F, 50V, Elect.
3010152	CSB456F11, Ceramic	354782299	0.22 μ F, 50V, Elect.
3010203	AF6146CG, Crystal	354761009	10 μ F, 35V, Elect.
	Ceramic filters	393141017	100 μ F, 16V, Elect.
3010041	SFE10.7MX-A	354741009	10 μ F, 16V, Elect.
3010132	SFE10.7MJK-A	354780229	2.2 μ F, 50V, Elect.
3010130	SFE10.7MZZK-A	354722219	220 μ F, 6.3V, Elect.
3010041	SFE10.7MX-A, CERA FIL	393142217	220 μ F, 16V, Elect.
3010123	SFZ-450JL, CERA FIL <D/W/T>	354722219	220 μ F, 6.3V, Elect.
3010076	BFU-450C, CERA FIL <D/W/T>	374721034	0.01 μ F \pm 5%, 50V, Plastic
	Capacitors	354780229	2.2 μ F, 50V, Elect.
3060020	NTC-2P17, Trimmer	354782299	0.22 μ F, 50V, Elect.
3060020	NTC-2P17, Trimmer	354761009	10 μ F, 35V, Elect.
354741009	10 μ F, 16V, Elect.	393141017	100 μ F, 16V, Elect.
3060017	220 μ F, 16V, Elect.	354741009	10 μ F, 16V, Elect.
393142217	220 μ F, 6.3V, Elect.	354780229	2.2 μ F, 50V, Elect.
354722219	220 μ F, 6.3V, Elect.	354722219	220 μ F, 6.3V, Elect.
374721034	0.01 μ F \pm 5%, 50V, Plastic	393142217	220 μ F, 16V, Elect.
354780229	2.2 μ F, 50V, Elect.	354722219	220 μ F, 6.3V, Elect.
354782299	0.22 μ F, 50V, Elect.	374721034	0.01 μ F \pm 5%, 50V, Plastic
354761009	10 μ F, 35V, Elect.	354780229	2.2 μ F, 50V, Elect.
393141017	100 μ F, 16V, Elect.	354782299	0.22 μ F, 50V, Elect.
354741009	10 μ F, 16V, Elect.	354761009	10 μ F, 35V, Elect.
354780229	2.2 μ F, 50V, Elect.	393141017	100 μ F, 16V, Elect.
354722219	220 μ F, 6.3V, Elect.	354741009	10 μ F, 16V, Elect.
393142217	220 μ F, 16V, Elect.	354780229	2.2 μ F, 50V, Elect.
354722219	220 μ F, 6.3V, Elect.	354722219	220 μ F, 6.3V, Elect.
374721034	0.01 μ F \pm 5%, 50V, Plastic	393142217	220 μ F, 16V, Elect.
354780229	2.2 μ F, 50V, Elect.	354722219	220 μ F, 6.3V, Elect.
354782299	0.22 μ F, 50V, Elect.	374721034	0.01 μ F \pm 5%, 50V, Plastic
354761009	10 μ F, 35V, Elect.	354780229	2.2 μ F, 50V, Elect.
393141017	100 μ F, 16V, Elect.	354782299	0.22 μ F, 50V, Elect.
354741009	10 μ F, 16V, Elect.	354761009	10 μ F, 35V, Elect.
354780229	2.2 μ F, 50V, Elect.	393141017	100 μ F, 16V, Elect.
354722219	220 μ F, 6.3V, Elect.	354741009	10 μ F, 16V, Elect.
393142217	220 μ F, 16V, Elect.	354780229	2.2 μ F, 50V, Elect.
354722219	220 μ F, 6.3V, Elect.	354722219	220 μ F, 6.3V, Elect.
374721034	0.01 μ F \pm 5%, 50V, Plastic	393142217	220 μ F, 16V, Elect.
354780229	2.2 μ F, 50V, Elect.	354722219	220 μ F, 6.3V, Elect.
354782299	0.22 μ F, 50V, Elect.	374721034	0.01 μ F \pm 5%, 50V, Plastic
354761009	10 μ F, 35V, Elect.	354780229	2.2 μ F, 50V, Elect.
393141017	100 μ F, 16V, Elect.	354782299	0.22 μ F, 50V, Elect.
354741009	10 μ F, 16V, Elect.	354761009	10 μ F, 35V, Elect.
354780229	2.2 μ F, 50V, Elect.	393141017	100 μ F, 16V, Elect.
354722219	220 μ F, 6.3V, Elect.	354741009	10 μ F, 16V, Elect.
393142217	220 μ F, 16V, Elect.	354780229	2.2 μ F, 50V, Elect.
354722219	220 μ F, 6.3V, Elect.	354722219	220 μ F, 6.3V, Elect.
374721034	0.01 μ F \pm 5%, 50V, Plastic	393142217	220 μ F, 16V, Elect.
354780229	2.2 μ F, 50V, Elect.	354722219	220 μ F, 6.3V, Elect.
354782299	0.22 μ F, 50V, Elect.	374721034	0.01 μ F \pm 5%, 50V, Plastic
354761009	10 μ F, 35V, Elect.	354780229	2.2 μ F, 50V, Elect.
393141017	100 μ F, 16V, Elect.	354782299	0.22 μ F, 50V, Elect.
354741009	10 μ F, 16V, Elect.	354761009	10 μ F, 35V, Elect.
354780229	2.2 μ F, 50V, Elect.	393141017	100 μ F, 16V, Elect.
354722219	220 μ F, 6.3V, Elect.	354741009	10 μ F, 16V, Elect.
393142217	220 μ F, 16V, Elect.	354780229	2.2 μ F, 50V, Elect.
354722219	220 μ F, 6.3V, Elect.	354722219	220 μ F, 6.3V, Elect.
374721034	0.01 μ F \pm 5%, 50V, Plastic	393142217	220 μ F, 16V, Elect.
354780229	2.2 μ F, 50V, Elect.	354722219	220 μ F, 6.3V, Elect.
354782299	0.22 μ F, 50V, Elect.	374721034	0.01 μ F \pm 5%, 50V, Plastic
354761009	10 μ F, 35V, Elect.	354780229	2.2 μ F, 50V, Elect.
393141017	100 μ F, 16V, Elect.	354782299	0.22 μ F, 50V, Elect.
354741009	10 μ F, 16V, Elect.	354761009	10 μ F, 35V, Elect.
354780229	2.2 μ F, 50V, Elect.	393141017	100 μ F, 16V, Elect.
354722219	220 μ F, 6.3V, Elect.	354741009	10 μ F, 16V, Elect.
393142217	220 μ F, 16V, Elect.	354780229	2.2 μ F, 50V, Elect.
354722219	220 μ F, 6.3V, Elect.	354722219	220 μ F, 6.3V, Elect.
374721034	0.01 μ F \pm 5%, 50V, Plastic	393142217	220 μ F, 16V, Elect.
354780229	2.2 μ F, 50V, Elect.	354722219	220 μ F, 6.3V, Elect.
354782299	0.22 μ F, 50V, Elect.	374721034	0.01 μ F \pm 5%, 50V, Plastic
354761009	10 μ F, 35V, Elect.	354780229	2.2 μ F, 50V, Elect.
393141017	100 μ F, 16V, Elect.	354782299	0.22 μ F, 50V, Elect.
354741009	10 μ F, 16V, Elect.	354761009	10 μ F, 35V, Elect.
354780229	2.2 μ F, 50V, Elect.	393141017	100 μ F, 16V, Elect.
354722219	220 μ F, 6.3V, Elect.	354741009	10 μ F, 16V, Elect.
393142217	220 μ F, 16V, Elect.	354780229	2.2 μ F, 50V, Elect.
354722219	220 μ F, 6.3V, Elect.	354722219	220 μ F, 6.3V, Elect.
374721034	0.01 μ F \pm 5%, 50V, Plastic	393142217	220 μ F, 16V, Elect.
354780229	2.2 μ F, 50V, Elect.	354722219	220 μ F, 6.3V, Elect.
354782299	0.22 μ F, 50V, Elect.	374721034	0.01 μ F \pm 5%, 50V, Plastic
354761009	10 μ F, 35V, Elect.	354780229	2.2 μ F, 50V, Elect.
393141017	100 μ F, 16V, Elect.	354782299	0.22 μ F, 50V, Elect.
354741009	10 μ F, 16V, Elect.	354761009	10 μ F, 35V, Elect.
354780229	2.2 μ F, 50V, Elect.	393141017	100 μ F, 16V, Elect.
354722219	220 μ F, 6.3V, Elect.	354741009	10 μ F, 16V, Elect.
393142217	220 μ F, 16V, Elect.	354780229	2.2 μ F, 50V, Elect.
354722219	220 μ F, 6.3V, Elect.	354722219	220 μ F, 6.3V, Elect.
374721034	0.01 μ F \pm 5%, 50V, Plastic	393142217	220 μ F, 16V, Elect.
354780229	2.2 μ F, 50V, Elect.	354722219	220 μ F, 6.3V, Elect.
354782299	0.22 μ F, 50V, Elect.	374721034	0.01 μ F \pm 5%, 50V, Plastic
354761009	10 μ F, 35V, Elect.	354780229	2.2 μ F, 50V, Elect.
393141017	100 μ F, 16V, Elect.	354782299	0.22 μ F, 50V, Elect.
354741009	10 μ F, 16V, Elect.	354761009	10 μ F, 35V, Elect.
354780229	2.2 μ F, 50V, Elect.	393141017	100 μ F, 16V, Elect.
354722219	220 μ F, 6.3V, Elect.	354741009	10 μ F, 16V, Elect.
393142217	220 μ F, 16V, Elect.	354780229	2.2 μ F, 50V, Elect.
354722219	220 μ F, 6.3V, Elect.	354722219	220 μ F, 6.3V, Elect.
374721034	0.01 μ F \pm 5%, 50V, Plastic	393142217	220 μ F, 16V, Elect.
354780229	2.2 μ F, 50V, Elect.	354722219	220 μ F, 6.3V, Elect.
354782299	0.22 μ F, 50V, Elect.	374721034	0.01 μ F \pm 5%, 50V, Plastic
354761009	10 μ F, 35V, Elect.	354780229	2.2 μ F, 50V, Elect.
393141017	100 μ F, 16V, Elect.	354782299	0.

LA3401(FM STEREO DECODER)

 μ PC 1346CS(RDS DECODER)

PACKIG VIEW



REF.NO.	PART NO.	DESCRIPTION
1	29091734	Pad L
2	29091735	Pad R
3	29053020	Carton box <D/W/T>
3	29053021	Carton box <S>
3	29053022	Carton box <G>
3	29053066	Carton box <P>
4	29100097-1AY	Poly bag
5	29110071	PP tape
7	282301	Staples
8	Accessory bag ass'y	
	292112	FM antenna
	29361970	Label UPC <BD>
	29361971	Label UPC <GD>
	2010098A	Connection cord
	2010200	Remote control cord
	232140	NMA-3057, AM loop antenna <D/T/W>
	24140315	RC-315T, Remote control
	25055018	CV-K-1, Conversion plug <W>
	25065462	YAE21-0237, FM adaptor <D/T/W>
	29342325	Instruction manual E
	29342326	Instruction manual U6 <P>
	29342328	Instruction manual U3 <T/W>
	29358002K	Service station list <D>
	29365019B	Warranty card <D>
	3010054	UM-3, Battery

NOTE: <D>: 120V model only
 <P>: 230V model only
 <PB>: U.K model only
 <W>: Worldwide model only
 <T>: Taiwanese model only
 : Black model only
 <S>: Silver model only
 <G>: Golden model only

ONKYO CORPORATION

International Sales Div. : 31 Sankyo-bld. 3-8-5, Asakusabashi, Taito-ku, TOKYO 111, JAPAN
 TEL : 03-5820-5865 FAX : 03-5820-5869

ONKYO U.S.A. CORPORATION
 200 Williams Drive, Ramsey, N.J. 07446, U.S.A.
 TEL : 201-825-7950 FAX : 201-825-8150

ONKYO EUROPE ELECTRONICS GmbH
 Industriestrasse 18-20, 82110 Germering, GERMANY
 TEL : 089 84 93 20 FAX : 089 84 93 226

ONKYO FRANCE
 Immeuble Le Diamant, Domaine Technologique de Saclay, 4 Rue Rene Razel, 91892 SACLAY, FRANCE
 TEL : (1) 69 33 14 00 FAX : (1) 69 41 35 84